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ABSTRACT

This report addresses two elements of an eight-part study of South Carolina's vocational education system. The report provides an overview of major national and state issues regarding vocational education in grades 9-12 and the structure and operation of the system. Statewide information about enrollment patterns and a profile of students who enroll in vocational education are provided. Four major issues are identified in the report: (1) various ideas of the purposes of vocational education; (2) accountability in vocational education; (3) problems in the day-to-day delivery of vocational education; and (4) identifying the true "vocational" students for purposes of accountability. The national overview of vocational education showed that (1) vocational education programs are varied; (2) nearly 3 million students are enrolled in vocational education programs related to an occupation, while about 4 million are enrolled in nonoccupational vocational programs; and (3) only about 10 percent of vocational education funding comes from the federal government. Information on enrollment patterns and profiles of students in vocational courses in South Carolina revealed that (1) two-thirds of students take at least one vocational course at their high schools; (2) enrollments tend to follow traditional gender lines; and (3) more whites than blacks enroll in business education, the reverse of the ratio in trade/industry courses. Based on the study, recommendations were made to clarify programs goals, to get information to students, and to increase efforts to expose students to nontraditional occupations. (KC)

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A STUDY OF VOCATIONAL EDUCATION

Report #1

Vocational Education:
Its Programs and Students

U.S. DEPARTMENT OF EDUCATION
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The First in a Series of Seven Reports to the
South Carolina General Assembly

Prepared by the
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CE047395

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EXECUTIVE SUMMARY

This report to the General Assembly, compiled and prepared by the State Council on Vocational and Technical Education, addresses two elements of an 8-part study of the state's vocational education system, as mandated in the EIA of 1984. The report provides an overview of major national and state issues regarding vocational education in grades 9-12, and the structure and operation of the system (programs, schools, administration, etc.). State-wide information about enrollment patterns, and a profile of students who enroll in vocational education are provided.

The following **major issues** are identified in the report:

* The purposes of vocational education are numerous, sometimes conflicting, and widely debated. Purposes include occupational skill training, preparation for advanced skill training, career exploration, training of special needs groups, provision of basic skills instruction in an applied setting, "employability" preparation, social adjustments in occupational patterns, and participation in economic recovery.

* Accountability in vocational education focuses too narrowly on a cluster of labor-related outcomes that may be insufficient for evaluating the variety of purposes and goals within specific programs.

* There are many unsolved problems in the day-to-day delivery of vocational education programs, such as scheduling, bussing to vocational centers, and restrictive funding and administrative policies that sometimes take precedence over student or labor market needs.

* There are a variety of patterns of student concentration in vocational education that make it very difficult to identify the truly "vocational" student for purposes of accountability. Students often participate in vocational courses for avocational or other purposes.

An overview of vocational education in the nation is provided as a background for understanding the operation and outcomes of vocational programs in South Carolina. This **national overview** reveals that:

* Vocational education today is more than just "training secretaries and mechanics." In addition to Business Education and Trade and Industrial training, occupational vocational programs are offered in Health Occupations, Agribusiness, Marketing and Distribution, and Occupational Home Economics.

* Across the U.S., nearly 3 million students above grade 10 are enrolled in occupationally-specific programs. The majority are in Business Education, Trades/Industry, and Marketing/Distribution.

* Vocational education also includes non-occupational programs such as Consumer and Homemaking, Industrial Arts, Prevocational education, and general business courses. In the U.S., about 4 million students in grades 9-12 are enrolled in these programs.

* States receive only a small portion of vocational education funding (about 10 percent) from the federal government. The remainder comes from state and local sources.

* Vocational education is offered in a variety of settings, including public and private schools, vocational high schools, and area vocational centers. The latter are geared to serve one or more school districts by providing a wide range of occupationally-specific programs.

Information on **enrollment patterns and profiles** of students who take vocational education courses in **South Carolina** revealed that:

* Two out of every three students take one or more vocational courses while in high school. Of these, about 61 percent take courses in occupationally-specific programs; the remainder take non-occupational courses such as typing, homemaking, or prevocational/industrial arts.

* Although there are 54 area vocational centers in the state, the majority of students (about two-thirds) take vocational courses at their high schools.

* Contrary to the belief that vocational education serves only certain student groups, enrollments in vocational education represent nearly equal proportions of males-females and white-nonwhite students.

* Business Education, Trade and Industry, and Agriculture account for the majority of enrollments in occupational vocational programs. Programs in Health Occupations, Occupational Home Economics (food service, child care, institutional management), and Marketing/Distribution (finance, sales, merchandising) account for less than 10 percent of occupational enrollments.

* Enrollments continue to follow gender traditions: males enroll predominantly in Trade/Industry and Agriculture; females in Business Education. The exception to this is Business Education, which is attracting increasing numbers of males.

* Enrollments in Prevocational and Industrial Arts represent less than 35 percent of all non-occupational enrollments, and the majority of these enrollments are male. Females in non-occupational programs enroll predominantly in Consumer/Homemaking. The proportion of males in non-occupational courses who are taking Consumer/Homemaking is fairly high (40% of the nonwhite males and 21% of the white males).

* Proportionately more white than nonwhite males enroll in Business Education; proportionately more nonwhite than white males enroll in Trade/Industry. The proportion of white females in Business Education is higher than for nonwhite females; the latter tend to take more Trade/Industry courses, particularly industrial sewing courses.

* The completion-to-enrollment rate for nonwhite males is lower in Marketing, Business Education, and Occupational Home Economics than in other occupational programs; for white males, the completion-to-enrollment ratio drops in the areas of Business Education and Health Occupations. The only appreciable drop for females is that proportionately fewer nonwhite females complete Health Occupations courses than are enrolled.

* One out of every four students enrolled in vocational education courses is disadvantaged and/or handicapped. This compares closely with their representation in the general high school population. Compared to all students, the handicapped and disadvantaged tend to take more Trade/Industry and Prevocational, and fewer Business Education courses.

* Over 80 percent of all students who complete occupational vocational courses are either employed, continuing their education, or in the military. About 8 percent are looking for work--a lower unemployment rate than for the state in general, and a considerably lower rate than for their age peers.

* The highest unemployment rates are among students who have completed Occupational Home Economics and Marketing courses--areas that have the highest number of job openings and replacements. The largest proportion of students who complete Business Education courses are continuing their education. Programs in Trade/Industry, Agriculture, and Health Occupations place the highest proportions of completers in employment.

Based on the examination of issues and enrollment patterns in vocational education, the State Council proposed several **recommendations.** These include:

* The need for a clear policy on the purposes and goals for vocational education in South Carolina, and the need to link these purposes with appropriate effectiveness measures.

* The need for various improvements in the information system that collects data on vocational enrollments, completions, and placements, as well as the need for a classification system that would allow for more accurate identification of vocational students.

* The need to expand Prevocational courses to provide exposure to a wider range of current and emerging occupations, and to provide incentives or program adjustments to encourage females to enroll in these courses.

* The need to increase efforts to expose students to non-traditional occupations.

BACKGROUND

The South Carolina Council on Vocational and Technical Education is a 13-member board appointed by the Governor to meet the federal requirements of the Carl D. Perkins Vocational Education Act (P.L. 98-524). The majority of the members of the Council represent the private sector. The Council operates as a state agency, with a small staff, and is funded by a federal allocation and a state appropriation. The State Council has responsibility for evaluating and making policy recommendations to the vocational and technical education systems, as well as the Job Training Partnership Act (JTPA) program. Compliance with these duties is required to ensure the state's eligibility to receive federal funds for vocational education.

The Education Improvement Act of 1984 (Subdivision A, SubPart 5, Section 2) directed the State Council on Vocational and Technical Education to conduct an intensive study of how the state's vocational education system can best prepare young people with skills employers will require between the years 1990 and 2000. The intent of the study was to provide information that would assist the General Assembly and the Governor in reviewing vocational education in Grades 9 through 12, as part of a statewide reassessment of job training efforts.

Vocational education has been defined in federal legislation as "organized educational programs which prepare individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree." This definition includes secondary, adult, and postsecondary vocational education. However, for the purpose of this and subsequent reports, the term "vocational education," as used in South Carolina, will refer to secondary (grades 9-12) programs only. Whenever information or data are presented that relate to the broader definition, it will be noted.

Although the stated purpose of the study was to project future job markets and skills, and to recommend ways in which the vocational education system can best meet these needs, the wording of the Act specified eight (8) key elements about which information was requested:

1 - ENROLLMENT PATTERNS: data on and analysis of students' use of the vocational education system;

2 - INFORMATION MANAGEMENT: recommendations for the creation of a new management information system that would provide more timely, accurate, and useful information on vocational enrollments, completions, and placements;

3 - STUDENT CHARACTERISTICS: a demographic and achievement profile of vocational students;

4 - EMPLOYER PERCEPTIONS: a report of employers' expectations of and experiences with the vocational education system;

5 - STUDENT PERCEPTIONS: a report of students' perceptions of and experiences with the vocational education system;

6 - NEEDS OF LOW ACHIEVERS: recommendations for how the vocational system can best meet the training and employment needs of low achievers;

7 - IMPROVED COORDINATION: recommendations for how the programs of the vocational education system can be better coordinated with other education, training, and employment agencies; and

8 - LABOR PROJECTIONS: a report on the state's labor needs for the coming decade that can be met by vocational program graduates.

Only the last element, labor projections, addressed the original charge in the legislation. Therefore, it was the Council's understanding that the eight specified elements of the study constituted the framework for collecting information which could then serve as a basis for more comprehensive recommendations. For this reason, the overall approach taken in the study was one of meeting the requirements of each element even though, collectively, they might surpass the general charge. The Council's intent is to provide objective, descriptive information and constructive recommendations, not to evaluate the vocational education system.

Reports will be issued serially, as each element of the study is completed, with an overall completion date of April, 1986. Each report will consist of both a detailed description of study activities and findings, and a brief summary. A final report will contain the combined findings from all study elements and a set of comprehensive recommendations.

This report to the General Assembly addresses study element #1 - ENROLLMENT PATTERNS and element #3 - STUDENT CHARACTERISTICS. An overview of vocational education at both the national and state levels is provided, along with information on programs, enrollments, and student characteristics. The basic purposes of vocational education and the main issues currently being debated regarding the role of vocational education are discussed. These elements were selected for the first report because a basic knowledge and understanding of the vocational education system is essential for interpreting future reports.

INTRODUCTION

No area of education is more complex, and none has changed as greatly as vocational education has in the past 20 years. During this period there have been dramatic increases in the number of enrollments, programs, and institutions offering vocational programs. At the same time, significant changes have occurred in national and state economies, labor supply and demand, and the training needs of special population groups. As the nation begins to tackle the problems of the U.S. workplace in the next decade, the relationship between vocational education and economic development is becoming increasingly important.

Vocational education is currently under considerable scrutiny on both national and state levels. While much discussion at the national level centers on funding, state legislators are primarily concerned with more basic issues: What should be the primary purpose of vocational education in the high schools? Is there unnecessary duplication between secondary and postsecondary programs? What changes or improvements are needed to ensure the vital role of vocational education in a state's economic development? In attempting to resolve these issues, policymakers in at least four other Southern states have undertaken rather comprehensive studies of their vocational education systems. As state legislators assume an emerging leadership role in education, it is necessary for them to be informed about vocational education's purposes, programs and outcomes, as well as the major policy issues that must be addressed. That is the purpose of this first report to the General Assembly.

Purposes of Vocational Education

Federal vocational education policy has two overriding and related goals -- one economic and the other social. The economic goal is to improve the skills of the labor force and to prepare individuals for job opportunities. Attaining this goal means encouraging vocational programs for new and emerging occupations, improving their quality, training and retraining adults, and coordinating program planning with labor market demands. The social goal is to provide more equal opportunites in vocational education for all programs. Achieving this objective requires assistance to local districts to provide programs of equally high quality, to overcome sex bias and stereotyping, and to provide programs and services for populations with special needs. Although the extent to which States share these goals varies considerably, most agree that the fundamental purpose of vocational education is to prepare individuals for gainful employment.

Although gainful employment may be the ultimate goal of vocational education, opinions vary about what kind of training is needed in secondary schools to achieve this objective. The three main views on the purposes of secondary vocational education seem to be:

1. skill training, with occupational specialization, to prepare students to enter the job market upon graduation or pursue advanced technical training;
2. career exploration, guidance services, development of "employability" skills, and information on occupational choices, with specific skills being taught in postsecondary programs or by employers;
3. both career exploration and skill training, with linkages between vocational training, academic preparation, and on-the-job experience.

Most states attempt to address all of these purposes by making career awareness and exploration classes available to students in grades 7-9, followed by a focus on employability and "world of work" courses in grades 9-10. Occupational "cluster" preparation (skills applicable to a group of related occupations) is then offered in grade 11, and occupationally specific classes are taught in grades 11 or 12 only. A few states, on the other hand, have developed explicit priorities that confine secondary vocational education to one or two basic objectives. Although South Carolina seems to be adopting the third view (the integration of career exploration and skill training), few if any clear policies exist with regard to the purposes of vocational education.

The notion that vocational courses can serve as a vehicle through which basic academic skills (reading, comprehension, writing, and mathematics) can be taught is currently being viewed as another purpose of vocational education. The recent emphasis on improving secondary education by "returning to basics" will increase graduation requirements and reduce opportunities for electives, the means by which most students take vocational courses. Many feel that while a more rigorous academic program may be in order for the 50 percent of high school students who are college-bound, a more relevant curriculum is needed for the remaining 50 percent who are at risk of dropping out of high school, who will enter employment after graduation, or who will fail to complete a college program. For the latter groups, it is felt that occupational skill training should be emphasized and that basic skills can best be taught with the hands-on approach to learning that vocational education offers.

The specific purposes, instructional emphases, and expected outcomes of vocational education are some of the major issues currently facing educational policymakers. Because vocational education has been tied historically to economic development, it is not surprising that these issues are re-emerging at the same time that the U.S. and South Carolina are undergoing significant economic changes.

The Question of Purpose in Vocational Education

Throughout its history, vocational education has attempted to serve both the education and training needs of the individual, and the labor needs of the economy. In addition, its purposes and expected benefits have changed with legislative priorities, both at the federal and state levels.

Prior to the 1960s, the main function of vocational education was to prepare manpower to meet the labor needs of an industrial economy. In the 1960s, the purposes of vocational education were moved away from emphasis on specific job skills toward emphasis on labor-related outcomes such as enrollment, placement and employer satisfaction. In the 1970s, the emphasis on enrollment was abandoned, and the principal criterion for distribution of funds was to provide increased educational opportunities for handicapped, disadvantaged, and special populations. Outcomes, however, continued to place heavy emphasis on placement and employer satisfaction with the preparation of vocational graduates.

Now in the 1980s, vocational education faces new challenges: increased criticism of the adequacy of preparation of high school graduates, economic changes brought on by increased foreign competition and "high tech" advancements, and an altered system of values that places less emphasis on the traditional "work ethic." Increasing evidence of underachievement among high school graduates, as documented in several widely publicized reports,[1,2] has prompted some educators to suggest that the problem lies partially in the rise of "vocationalism" -- too much emphasis on narrow occupational training and too little emphasis on the important "basics" of reading, writing, and mathematics. There is also a growing concern about low achievers, high school dropouts, and other special student groups who are leaving school virtually unemployable, with neither occupational skills, nor a minimum level of competence in basic skills. Although vocational education has had almost no representation on national study panels, it is being impacted significantly by proposed educational reforms.

While vocational educators are being asked to play a role in increasing basic skill achievement, they are also being expected to expand and modernize specialized skill training to meet high tech needs, to participate in state and local economic

recovery plans, and to increase its involvement with business and industry. At the same time, it is expected to produce high levels of student satisfaction, increase retention of potential dropouts, develop improved work habits and attitudes, increase potential for entrepreneurship, ensure articulation for uninterrupted development of advanced skills, maintain placement quotas, and contribute to increased productivity. In fact, throughout the literature, over 250 different outcomes have been identified for vocational education!

This vast and sometimes conflicting set of purposes and expectations is perhaps the most salient issue in vocational education. If vocational education is to strengthen its occupational skill development capacity, one set of legislative priorities is needed: funds must be made available for more modern equipment and facilities, competitive teacher salaries, updating faculty skills, and for developing specialized training for those most in need. Emphasis will need to be placed on involving vocational education in economic planning and on requiring programs to demonstrate their responsiveness to labor market demands. Even greater collaboration between business, industry, and education must be encouraged.

But if vocational education is to strengthen its educational role, and help improve the academic achievement of students, a very different set of legislative priorities is called for: clear policies, roles, and functions for vocational education must be established, faculty must be trained in how to teach basic skills within the context of vocational programs, and funds must be made available to support increased articulation between secondary and postsecondary training and to encourage demonstration projects that focus on innovative techniques for improving educational skill achievement in vocational programs. Also, the evaluation criterion for vocational education must be revised. Instead of measuring training-related placement and employer satisfaction, alternative measures of educational achievement will be needed as success criteria.

Issues in South Carolina

Vocational education in South Carolina is already being affected by educational reforms. Increased requirements for graduation and entrance into state-supported colleges will reduce the number of electives available to students for taking vocational classes. At the same time, new requirements for mandatory remediation will reduce electives for the lower achieving student. Thus, vocational enrollments among students at both the top and lower quartiles will be negatively affected.

Funding, scheduling, and enrollment quotas also affect vocational enrollments in ways that are not always apparent. When a school's funding is reduced in proportion to the number of students who take vocational classes at another site,

vocational enrollments may be limited or subtly discouraged. Scheduling and transportation pose additional problems: bussing schedules must accommodate students grouped by grade level, limiting vocational enrollments in the grades 9 and 10. In some cases, enrollment in a course at a vocational center can prove to be detrimental to the student because of transportation scheduling. For example, a student who elects to take a business course at a vocational center may find him/herself in a lower level math course, simply because the higher level course is taught while the student is at the vocational center. This is especially problematic in small schools where the number of course repetitions is more limited. The issue here is that in some cases, enrollment quotas, school policies, and class scheduling, not student or labor needs, determine placement in vocational programs.

Another issue is that while vocational programs are being held increasingly accountable for job placement, they have little control over enrollment. Placement criteria are even more inappropriate when one considers the fact that each vocational program has multiple goals, and they are not the same for every program. Nor does every program attract students with the same intentions: students may elect to enroll in a business course for very different reasons than do students who participate in a series of courses designed to teach a trade. But the outcomes are expected to be the same -- placement in a training-related job.

The issue of what should be the purposes of vocational education cannot be debated or resolved in this report, nor in the absence of clear information. And it is important to be aware that differences in opinion do exist, and they affect the way in which information is interpreted once it is made available. For this reason, the State Council will attempt, throughout its reports, to provide information without evaluative comment. However, where appropriate, findings will be related to the issues outlined above. Only when all the information has been accumulated will the Council propose several overall recommendations in a final report to the General Assembly. It is hoped that all those who are currently concerned with vocational education in South Carolina will also reserve evaluation and decision-making until all the reports have been submitted.

THE BIG PICTURE: VOCATIONAL EDUCATION IN THE UNITED STATES

Vocational Programs

Since 1917 vocational education has provided occupational training to millions of people in many different types of educational institutions. In 1980-81 (the most recent period for which data are available), the National Center for Education Statistics estimated that nearly 17 million people were enrolled in vocational education programs. About 10.5 million were enrolled at the secondary level; the remainder were in postsecondary or adult programs.

Vocational education programs supported by federal funds fall into several major categories: Agriculture, Business Education, Health Occupations, Home Economics (both occupational and non-occupational), Marketing and Distribution, Technical (usually applies to postsecondary only), and Trade and Industrial occupations. Industrial Arts and Prevocational programs are not occupationally-specific, but they include courses surveying a range of occupations, as well as woodworking and metalworking shop.

In some sense, all education can be viewed as having a vocational component. The skills needed for most jobs are the fundamental skills all students should learn: being able to read, write, speak, reason, and compute. But in addition, vocational education helps students acquire occupational skills, introduces them to a variety of employment options, and provides guidance on job seeking, applying for jobs, and keeping work skills upgraded.

Another important aspect of vocational education is "cooperative education", which is intended to provide supervised work experience related to a student's vocational program. As an arrangement or method of instruction that can be applied to any occupational program, cooperative education involves paid employment (usually 3-4 hours a day) while the student continues classroom instruction for part of the day. The intended benefits include job experience, improved transition from school to work, acquisition of good work habits and skills, and the establishment of an employment record. Employers also benefit considerably from being exposed to a pool of potential employees whose training can be supervised firsthand. In 1979-80, over one half million high school students were enrolled in cooperative education programs.

In addition to skill training, vocational programs offer opportunities for student personal development. There are nine major student organizations in vocational education, with student memberships totalling nearly two million. The largest organizations include Distributive Education Clubs of America, Future

Business Leaders of America, Future Farmers of America, Future Homemakers of America, Health Occupations Students of America, and Vocational Industrial Clubs of America. Their goals are to promote the development of vocational competencies, civic responsibility, and leadership skills in their members. These organizations are not mandated by law, but they often play an important role in the lives of vocational students.

Schools

Vocational education is offered in almost 28,000 public and private institutions across the US. At the secondary level, vocational education is typically offered at public comprehensive or vocational high schools, and area vocational centers. A comprehensive high school offers programs in both vocational and general academic subjects, but the majority of students are not enrolled in occupational vocational programs (although a majority may take at least one vocational course). A vocational high school offers a full time program of study in both academic and vocational subjects, but the majority of students are enrolled in occupationally-specific programs. An area vocational center is usually a shared-time facility that provides instruction only in vocational education to students from one or more schools in a region. Students attending a vocational center receive general academic instruction in their "home" high schools.

In some areas of the country, there is rivalry between area vocational centers and "feeder" high schools. Administrators of high schools are sometimes reluctant to let students take their vocational courses at a vocational center because they fear the loss of revenue. They may lose support directly (capitation funding), or indirectly through loss of teaching staff.

Throughout the nation and within states, there is considerable variability in the quality and comprehensiveness of vocational education. Some programs have kept pace with technological advances and changing job markets, while others are ill-equipped, understaffed, and poorly matched to the labor market. Unfortunately, the effectiveness of vocational programs is usually measured by "placement rates" which do not take into account known differences in quality.

Contrary to popular belief, small towns and rural areas are not oversupplied with vocational schools and centers. Residents of rural areas seldom have access to a large variety of occupations. Their high schools usually offer programs only in Agriculture, Business, and non-occupational Home Economics. Rural schools often can least afford programs that require expensive equipment. Because of its demands for relatively high expenditures and for flexibility to adapt to changing labor needs, vocational education can face grave difficulties in rural areas.

Students

Of the 10.5 million high school students who take vocational courses, about 52 percent are female; 48 percent are male. Minority students make up about 24 percent of all vocational enrollments (secondary and postsecondary), and nearly one half million vocational students have handicaps. A recent report on the status of vocational education[3] indicated that 30 percent of all vocational students come from the lowest socioeconomic group and 12 percent come from the highest.

How do vocational students compare with students enrolled in general or academic (college preparatory) high school programs? According to the National Center for Education Statistics,[4] vocational students are more similar to those in general programs than those in college preparatory programs. Compared to college-prep students, vocational students tend to:

a) come from families that have lower educational attainment,

b) score lower on standardized achievement tests, and

c) work more while in high school.

If vocational education is serving the populations for which it was intended (e.g., those not interested in or who were rejected by college programs, those needing immediate employment, the disadvantaged and handicapped, etc.), its students should be expected to have lower scores on achievement tests and lower socioeconomic status than those planning to go to college. For example, according to national averages, blacks and Hispanics do take more vocational courses in high school. But among students with comparable scores on achievement tests and comparable levels of parental education and income, black youth take far less vocational education than whites.

Enrollment Patterns

At the secondary level, nearly three million students above grade 10 are enrolled in programs designed to train them for specific occupations. The largest enrollments are in Business Education (over one million), followed by Trade and Industrial occupations (nearly one million), Agriculture, and Marketing/-Distribution. Non-occupational Home Economics and Industrial Arts account for over four million of all secondary vocational enrollments across the nation. Young women in high school enroll predominantly in occupational and non-occupational Home Economics, Business Education, and Health Occupations. Males predominantly choose Agriculture and Trade/Industrial programs. Students in minority groups enroll mainly in Home Economics (occupational and non-occupational), Business Education, and Trade/Industrial programs.

Not all students concentrate their vocational studies in one occupational area. An analysis of transcripts of over 3,000 high school graduates[5] resulted in a classification scheme that describes five different levels of participation in vocational courses. The study found that only about 14 percent of the students were "concentrators" (took at least six courses in a specialty area, in a continuous fashion). Another 23 percent were found to be "limited concentrators" (took somewhat fewer credits, with some breaks in continuity and occasional termination after the eleventh grade). About 13 percent concentrated early in a specialty, but frequently stopped after the tenth grade or crowded the courses into one or two years ("concentrator-explorers"), and 2 percent sampled widely across program areas, but did not develop a specialty ("explorers"). Of the remaining 48 percent, about 26 percent took a course or two, but not in a way that would lead to a salable skill. Only 22 percent had taken no occupational courses.

This variety in patterns of participation in vocational education is rarely taken into consideration when evaluating vocational education or in making decisions about the delivery of vocational education. In the above study, for example, nearly 50 percent of the high school graduates who took vocational courses did not do so in a manner that was directed toward securing specific employment. Yet training-related employment remains the primary criterion for assessing the effectiveness of vocational education.

In nearly all states, vocational courses are offered as electives; rarely is a vocational course included in state requirements for high school graduation. But several states, including South Carolina, have increased graduation requirements, and thus reduced the number of electives available to students. A recent study by the American Vocational Association[6] of nearly 300 vocational educators across the country found that more than two-thirds of those responding said enrollments in secondary vocational education were either "slightly or severely decreased" in their districts over the past three years. Eighty percent of the educators said their students were less able to enroll in vocational education courses because of increased graduation requirements that reduced opportunities for electives.

Administration and Funding

The federal role in vocational education is now defined largely by the Carl D. Perkins Vocational Education Act of 1984. This new legislation, and subsequent regulations, prescribe in greater detail than did earlier laws how states are to distribute federal funds to eligible recipients with the use of formulas. The

general purposes of the Act are to assist states in 1) implementing program improvements, innovations, and expansions; 2) increasing opportunities for special populations (e.g., handicapped, disadvantaged, single parents, etc.); and 3) providing a full range of special programs and supportive services. These priorities are reflected in the funding structure.

At the secondary level, Vocational Education Act (VEA) funds are the only significant federal contribution to vocational education. Federal funds flow to the state in a block grant which is used to fund local programs according to federal regulations and an annual plan. These funds, which amounted to over $716 million in 1984-85, are provided under two Titles. Title II is the basic grant for administration, program improvement and expansion, and the "set asides" for special populations. Title III is for special programs such as services provided by community-based organizations, consumer and homemaking education, adult training and retraining, career counseling and guidance, and industry-education partnerships for training in high technology occupations.

Overall, federal funds account for only about 10 percent of the total amount spent for vocational education throughout the US. The remaining 90 percent comes from state and local sources. However, the ratio of federal to state and local funds varies considerably by the purposes or uses of the funds. Some states allocate funds to secondary schools on the basis of school attendance (capitation); others have more complex funding formulas that take into consideration several economic and enrollment factors.

Since the governance and operation of vocational programs are the responsibility of state government and local school districts, program planning and the importance of advisory councils are also stressed in the new Act. Each state receiving federal VEA funds must designate a State board for vocational education to be responsible for administering the vocational programs. Each state must appoint a state council (whose members largely represent business and industry) to assist in developing the state plan for vocational education, in evaluating programs, and in identifying vocational training needs within the state. Although not required in the current VEA, some states (including South Carolina) require each local education agency that receives vocational education funds to also establish a local advisory council with broad community representation. Many states continue to strongly recommend local councils. The local advisory council's mandate is to advise the local education agency regarding employment needs and the extent to which vocational programs are meeting those needs.

The new Act, which was enacted in October of 1984 and which went into effect July 1 of 1985, will require several changes and new emphases at the state level.

The percent of funds that must be set aside for special populations is increased. Program funds can be used only for improvements and expansions, not to maintain existing programs. State plans for vocational education must be submitted on a shorter, three-year cycle and they must be coordinated with JTPA plans. Improved coordination with state councils, JTPA offices, and postsecondary education must be assured in a variety of ways. Many states are already undergoing significant changes to accommodate the new federal requirements, while also attempting to fulfill the requirements of new educational improvement legislation.

Evaluation of Vocational Education

In recent years, the effectiveness of vocational education has been the topic of considerable debate. Most people would agree that in the absence of clear purposes and objectives, it is very difficult to evaluate any program. This seems to be the case in vocational education. The issue of the effectiveness of vocational programs will be more completely addressed in subsequent reports to the General Assembly, but a few general statements are in order here.

Proponents of vocational education claim that such programs equip students with skills and attitudes that are necessary for a successful employment, putting them one step ahead of youths who have not had such training. Critics argue that vocational education, by focusing too narrowly on preparation for immediate employment, limits opportunities and dooms graduates to a lifetime of low status, low paying jobs. Policymakers are understandably interested in who is right, but there is no simple answer. Many factors influence the outcomes of vocational education, few of which have been studied at the state level.

The information base about outcomes of vocational education has been expanded considerably through two large-scale, national longitudinal studies, one by the U.S. Department of Labor and another by the U.S. Education Department. These surveys are helpful in comparing what happens to vocational graduates with what happens to their counterparts who complete a general curriculum. The results have provided some answers to the following often-asked questions about vocational education.

Does vocational education help to keep potential dropouts in school?

This is an important question because high school dropouts have higher unemployment rates than graduates. Based on a sample of 3400 young people, all else being equal, participation in vocational education programs increased the probability of high school completion and decreased the likelihood of unemployment.(7)

Are vocational programs well matched to labor market needs?

Critics of vocational education claim they are not. They argue that programs at all levels, especially in high schools, cannot possibly keep pace with rapidly changing technology and equipment. They also claim that such traditional programs as Agriculture and some Trade/Industry courses maintain stable enrollments in the face of declining employment opportunities in these areas. Critics conclude that interest, popularity, and cost - not labor market needs - drive vocational education programming.

On the other hand, vocational education proponents argue that nationally or even state projected occupational trends are relatively useless at the local level, and highly debatable with regard to manufacturing. They contend that local labor needs are being assessed, but that student demand and enrollment quotas are also important factors in determining vocational course offerings.

The most widely accepted labor market projections indicate that the greatest number of new jobs are expected to be in health services, computers, repair of business and industrial machines, banking, secretarial services, and recreation. Employees in most of these growth areas will need strong general skills and job-specific skills. The question is: what should be taught, where, and when?

Do vocational graduates do better in the labor market?

Evidence from longitudinal surveys indicate that some programs (Business Education for women and Trade/Industry for men) give participants an economic advantage the first eight years after graduation. The most consistent finding is that number of years of schooling, not type of training, is the major factor influencing gainful employment. But many feel that placement and early employment experience are not adequate criteria for judging program effectiveness. Two reasons for this are that a) the local economy affects job placement strongly, and b) youths tend to be very erratic in the job market the first few years after graduation.

Which institutions offering vocational education serve students best?

Few studies have examined the issue of institutional quality and those that have been reported focus only on urban areas. In large cities, high schools have been found to be inferior to vocational centers in their ability to offer high quality occupational programs. This is often due to vocational centers' greater depth of programming, ability to employ more experienced staff, the higher priority given to vocational education, and closer ties to business and industry. Some analysts have proposed that high schools drop outmoded vocational programs and shift their resources to improving the quality of basic skills offerings, expanding and

improving career counseling services, and providing more opportunities for structured work experiences. The report of the Committee for Economic Development[2] recommended that since area vocational centers appear to provide better-quality instruction and a greater range of vocational resources, separate vocational programs in comprehensive high schools should be gradually eliminated.

What factors contribute to the success of vocational programs?

In contrast to schools with low job placement rates, schools that are most successful in placing vocational graduates are those in which: a) teachers and counselors believe vocational education and job placement are important; b) teachers assume responsibility for keeping in touch with employers and placing students; c) admissions to skill training programs are restricted to students who appear capable and motivated; d) timely occupational information is provided to students and teachers; e) results of employer needs assessments are used to update programs; and f) there is greater student participation in vocational organizations.[8]

How do employers rate vocational education?

A survey of manufacturers' views[9] showed that over half of the respondents said their companies had benefited from vocational education, and about 60 percent said vocational graduates needed less training than did other new employees in similar jobs. In general, vocational education is more highly regarded in companies that are involved in collaborative projects with vocational programs, reaffirming the importance of business-education partnerships. Some joint activities (providing work experience for students or instructors for courses) were much preferred to other activities (allowing equipment to be used on premises for programs).

A word of caution regarding the results of vocational education evaluations is in order. Vocational education is provided in many different institutional settings under a rather loosely coordinated system of control. The quality of programs and intensity of instruction varies considerably, even within a given occupational field. Many evaluations of vocational education do not distinguish between the returns for stronger and weaker programs. It was pointed out earlier that differences in the intensity of concentration in a vocational area will also affect outcomes.

The findings of evaluation studies are further clouded by the fact that some proportion of vocational students enroll in vocational programs or courses for non-occupational reasons, such as personal enrichment. These people may enter the labor force looking for work intentionally unrelated to their vocational training.

Whether or not the development of avocational skills is an appropriate use of public funds is not an issue in this report, but the fact that vocational education serves this dual function makes evaluation difficult. Also, most of the evaluation studies focus on benefits to graduates to assess the worth of vocational education. However, employers are often the primary beneficiary, since they can shift some of the costs of training employees onto government. Ignoring benefits to employers understates the value of vocational programs.

THE STATE PICTURE: VOCATIONAL EDUCATION IN SOUTH CAROLINA

Vocational Programs

Each year, South Carolina's vocational education system provides occupational and non-occupational training to about 125,000 secondary students. Vocational enrollments have been relatively stable over the past five years, as the figures below indicate:

	Vocational Enrollment	Percent of Total Secondary Enrollment
1980-81	128,586	66.1%
1981-82	128,690	67.4
1982-83	124,376	67.0
1983-84	125,807	69.2
1984-85	123,335	67.9

Sources: Vocational Enrollment Reports, Office of Vocational Education, and 180-Day Enrollment Summary, Management Information Section, S.C. Department of Education

These figures show that on the average, about 67 percent of all secondary students enroll in one or more vocational courses. This exceeds the national average by about five percent.

South Carolina offers vocational training in six occupational areas and four non-occupational programs. The occupational areas include:

1) Agriculture - prepares students for careers on the farm and in agribusiness occupations such as forestry, horticulture, forestry, natural resources;
2) Occupational Home Economics - provides training in child care, food services, institutional and home management;
3) Business Education - offers a variety of courses in accounting, data processing, typing, business communications, office procedures, business math and business English;
4) Health Occupations - prepares students with skills and knowledge for immediate employment in health settings or for advanced training;
5) Marketing and Distributive Education - provides training in marketing and merchandising skills such as selling, buying, financing, sales;
6) Trades and Industrial - offers training for initial entry in a wide variety of occupational areas such as cosmetology, construction trades, mechanics and repairers, and precision production.

The non-occupational programs are:

1) Consumer and Homemaking Education - provides learning experiences in family living and homemaking skills;
2) Prevocational Education - allows students to explore a variety of occupations and gives guidance in helping them identify their abilities and interests;
3) Industrial Arts - offers manipulative and instructional experiences in the tools, machines, products, and occupations of the technological world;
4) Personal Typing and Notehand - provides training in basic keyboarding and shorthand methods.

In addition, the vocational system provides a variety of special programs and services for handicapped students, displaced homemakers and other adults, and disadvantaged students. Other programs include support services for women, sponsorship of student organizations, personnel development for educators, grant awards for sex equity projects, guidance and counseling services, career education, and innovative and research projects. Vocational education also includes an adult training component, which will not be described in this report as it is not part of the secondary education system.

In 1980, in response to the need to assure quality programming and in order to meet state and federal evaluation requirements, the State Office of Vocational Education (OVE) developed a set of comprehensive Standards for Vocational Education. These criteria, which cover all aspects of an educational program including district and school administration, student services, curriculum, and instruction, are used to evaluate 20 percent of all vocational programs each year. Thus, each vocational program in the state is evaluated by a team of OVE staff and consultants every five years. The Standards, which vastly exceed criteria used by most state and regional accreditation agencies, allow for the identification of both strengths and deficiencies in the vocational education system. These evaluations serve as a feedback loop to promote and assist with the operation of vocational programs, as well as to assure fiscal accountability and provide data for future planning.

Schools

Vocational training is provided in South Carolina through a network of 54 area vocational centers and 221 secondary high schools. The geographic location of the area vocational centers throughout the state is shown in Figure 1. Most vocational centers serve only one school district (with one or more high schools), but about 20 percent of them serve multi-school districts and operate under a separate Board. In

Figure 1: Location of Vocational Centers in South Carolina

▲ Indicates Area Vocational Education Center

some cases vocational centers are attached to or within walking distance of a local high school; in other cases students must be bussed from a "home" high school to a vocational center. South Carolina has only one vocational high school. Appendix A is a list of all vocational centers and comprehensive high schools in the state.

High schools offering vocational programs must provide instruction in at least four occupational program areas (or 10 Trade and Industrial courses and two other program areas). Comprehensive high schools, of which there are 39 in South Carolina, meet this criterion within their physical facilities. Non-comprehensive high schools may include programs offered at the vocational center to which they "feed" students in meeting this standard. All high schools are required to offer prevocational education as an elective for all students in grades 9 and/or 10, which must cover six exploratory areas (five areas plus "The World of Work").

The distribution of vocational enrollments between high schools and area vocational centers is shown in Table 1. It needs to be pointed out that in some cases, particularly in Business Education, a student may take lower level courses at a home high school, and upper level courses at a vocational center. Since the location at which a student takes a course in a given program may vary from year to year, the enrollment distribution between high schools and vocational centers is

Table 1: Location at Which Students Took Vocational Courses (1984-85)

	PERCENT OF ENROLLMENTS	
	High Schools	Voc Centers
Agriculture	86%	14%
Marketing and Distribution	69%	31%
Business Education	86%	14%
Home Economics (Occupational)	24%	76%
Health Occupations (Secondary)	20%	80%
Trades and Industrial	27%	73%
All Occupational Programs	67%	33%
Consumer and Homemaking	96%	4%
Prevocational	83%	17%
Industrial Arts	93%	7%
Personal Typing/Notehand	84%	16%
All Non-occupational Programs	91%	9%

only an approximation. It is also important to remember that the location at which a student enrolls in a program has little if anything to do with the quality of the program. Accessibility, availability of teaching staff, equipment and space requirements, and funding patterns largely determine which courses will be offered in high schools, and which will be taught at vocational centers.

Table 1 shows that in 1984-85, about one third of all occupational course enrollments were in vocational centers. Within occupational programs, the majority of students who enrolled in Home Economics, Health Occupations, and Trade/Industrial programs took these courses at vocational centers. Such findings are not surprising when the equipment and space requirements of various programs are considered.

The majority of all non-occupational course enrollments were in high schools. This has prompted some educators to propose that non-occupational programs may be more akin to general education than to vocational preparation. This seems to be true from both a content and an employment standpoint. It has been recommended[2] that the term "vocational education" be limited to only those programs that are specifically designed to prepare students for employment upon graduation. Further, that all other forms for nonacademic, non-occupational instruction should be identified by a different term to avoid confusing them with curricula designed to teach specific job skills.

It is also interesting to note that while vocational centers might be the ideal setting for providing Prevocational courses (i.e., introducing students to various occupations), bussing and scheduling constraints usually restrict these classes to high schools.

Administration and Funding

Less than 10 percent of South Carolina's $143 million budget for vocational education (secondary and adult) comes from federal sources. In FY 1984-85, the state received only $12.3 million in federal funds; the remainder came from state and local sources. Of the total amount spent, local school districts received about 69 percent, 16 percent was used for state administrative purposes, approximately 9 percent was awarded to the technical education system for postsecondary and adult training, and nearly 6 percent was awarded to higher education institutions (primarily for teacher training).

In FY 1985-86, the state will receive $13.9 million in federal VEA funds, of which nearly $13.4 million will be used for Title II purposes. Fifty seven percent of Title II funds is earmarked for special population "set asides." The remaining 43 percent will be used for program improvements and expansions. Title III funds

(about $546,000) will be used for Consumer and Homemaking Education. Federal appropriations for other programs under Title III have not yet been made.

Use of the Vocational Education System

The following sections of the report specifically address the requirements of the EIA study: students' use of the vocational education system (enrollments), and demographic and achievement information on students who enroll in, complete, and are placed from vocational programs. No new data were collected for these analyses. Rather, the summaries are based reports from the state's existing information system.

The Information System

The major source of data regarding vocational enrollments is the Vocational Education Data System (VEDS). This sytem, which is operated by the Research Coordinating Unit of the State Office of Vocational Education, was designed to collect information on vocational enrollments, completions, special needs groups, placements, and employer follow-up. Until this year, VEDS was required for federal reporting purposes. Beginning this year, placement data will be collected by local education agencies, and employer follow-up studies will be suspended because federal law no longer requires them. In addition, several other changes and improvements are being made in the state's data collection system. Except for Table 5, the VEDS was the sole source of data contained in this section of the report.

Through the VEDS, it is possible to obtain enrollment counts according to a variety of groupings: by School, Course, Program Area, School District, School Type, Grade, Race, Sex, etc. Such counts are "unduplicated," meaning that a given student who might be enrolled in two or three vocational courses simultaneously is counted in only one of them. The result is an accurate tally of students, but a deflated count of the actual participation in courses. All of the enrollment figures contained in this report reflect actual numbers of students, not duplicated course enrollments.

Occupational and Non-occupational Enrollments

Over 123,000 secondary students were enrolled in vocational (occupational and non-occupational) courses or programs in school year 1984-85. This figure represents nearly 68 percent of all secondary enrollments. That is, two out of every three students in grades 9-12 took at least one vocational course during the last school year.

Figure 2 shows graphically how vocational enrollments were distributed between occupational and non-occupational programs. It is important to keep in mind that since these figures represent unduplicated counts (students who were enrolled in more than one vocational course at a given time were counted in only one), actual course participation is underestimated.

Slightly more than 60 percent of the students who enrolled in vocational programs in 1984-85 took courses in occupational areas. Of these students, the largest proportions took courses in Business Education, followed by Trade and Industrial Education, and Agriculture. Courses in Marketing/Distribution, Occupational Home Economics, and Health Occupations accounted for a total of less than 10 percent of all occupational enrollments.

Nearly 40 percent of all vocational enrollments in school year 1984-85 were in non-occupational areas. Of the 48,538 students who took non-occupational vocational courses, nearly 60 percent were in Consumer and Homemaking, and over one fourth were in Prevocational. The only Business Education course that is now considered "non-occupational" is personal typing/notehand.

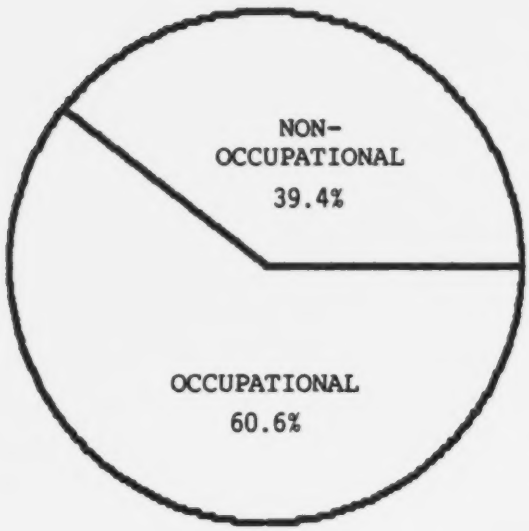
To some extent, enrollments in occupational and non-occupational courses are affected by the number and variety of courses offered. It is worth noting that the widest variety of courses is offered in Business Education, Trades/Industry, Agriculture, and Consumer and Homemaking programs.

Enrollments are also affected by grade level prerequisites: courses can be taken as early as the ninth grade in some programs, but may be restricted to upper level students in other areas. Often, this is a result of scheduling requirements. Particularly in small schools, where the number of times a class can be offered is more limited, bus transportation and scheduling of vocational class periods must be done according to grade level. For example, some juniors and seniors might take their academic classes in the morning, and be bussed to a center for vocational classes in the afternoon, while teachers are holding classes for grade 9 and 10 students.

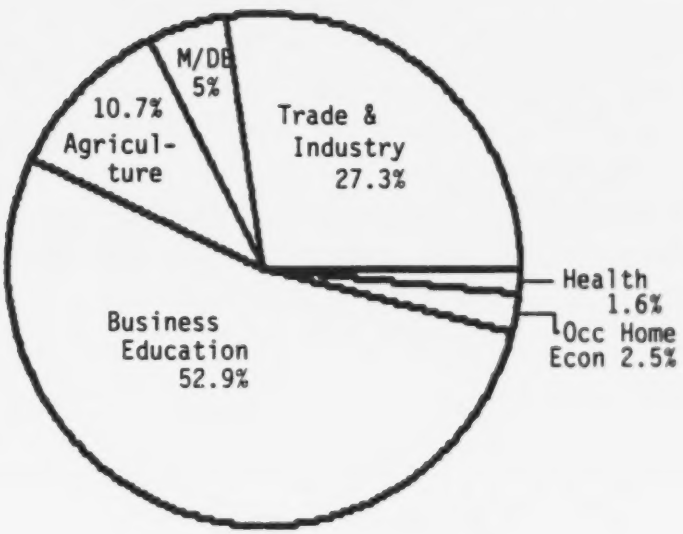
Also, it is important to remember that even though enrollments appear relatively low in some areas (e.g., Health Occupations), the supply of graduates may be sufficient to meet local labor demands. Enrollment figures must be viewed in relation to labor market demand, specificity of the training, and other factors, not according to the actual number of students enrolled.

Figure 2: Vocational Enrollment by Type of Program (1984-85)

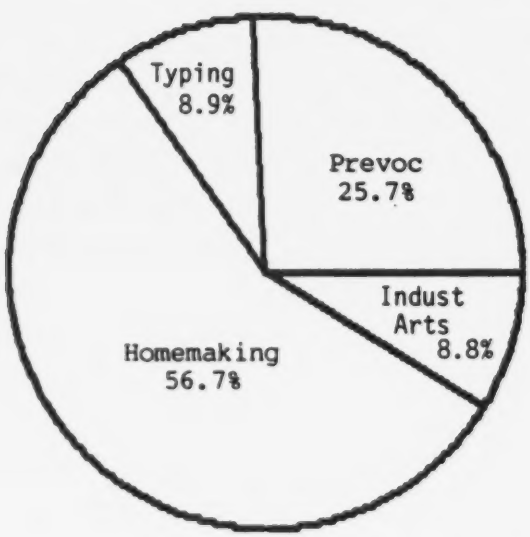
ALL PROGRAMS



OCCUPATIONAL ONLY



NON-OCCUPATIONAL ONLY



Enrollments in Specific Programs

The distribution of students across occupational and non-occupational programs is shown in Table 2. Since Trade and Industry Education includes over 30 specialties, enrollments in these programs are clustered into four main categories: 1) Consumer and Personal Services (cosmetology and barbering); 2) Construction Trades (masonry, building construction, electricity, plumbing); 3) Mechanics and Repairers (auto, appliance, small engine, heating and air conditioning, industrial equipment, auto body); and 4) Precision Production (drafting, graphics, metal work, machine shop, sheet metal, welding, industrial sewing).

The highest enrollments among males (white and non-white) were in Trade/-Industry, Business Education, and Prevocational courses. A significant number also took non-occupational homemaking courses. The highest enrollments among females were clearly in Business Education and Consumer/Homemaking. Other findings from Table 2 are that:

1. For all student groups, a very small proportion of enrollments were in high labor demand areas (e.g., sales, food services, personal services, and health).
2. A considerably higher proportion of white students and females took Business Education courses than did non-white students or males.
3. Proportionately more non-white female students enrolled in Trade/-Industry courses than did white females. This is due primarily to high enrollments of black females in industrial sewing courses.
4. Within Trade/Industry programs, a much higher percentage of non-white male students selected courses in the Construction Trades category than did white male students.
5. Within non-occupational programs, the percent of non-white males enrolled in Consumer/Homemaking courses was nearly double that of white males, but the opposite was true with regard to Industrial Arts.
6. The percent of white students (male and female) who took Personal Typing courses is more than twice that of non-white students.
7. Of the total enrollments in Industrial Arts and Prevocational, only a small proportion were female.

Table 2: Distribution of Students Across Vocational Program Areas (1984-85)

	White Males	Non-white Males	White Females	Non-white Females	All Voc Enrolled
OCCUPATIONAL PROGRAMS					
TOTAL ENROLLED	21,724	15,925	21,109	16,039	74,797
Agriculture	20%	17%	2%	2%	10.6%
Marketing & Distribution	3	5	6	8	5.0
Business Education	36	30	79	65	52.9
Home Economics (Occup)	**	2	2	6	2.5
Health Occupations	**	**	3	3	1.6
Trade & Industrial	41	46	9	14	27.3
Consumer Services	(**)	(**)	(4)	(3)	
Construction Trades	(11)	(24)	(**)	(1)	
Mechanics & Repairers	(17)	(14)	(**)	(**)	
Precision Production	(12)	(8)	(3)	(10)	
NON-OCCUPATIONAL PROGRAMS					
TOTAL ENROLLED	11,578	10,694	12,472	13,794	48,538
Consumer & Homemaking	21%	40%	77%	82%	56.7%
Industrial Arts	22	12	2	2	8.8
Prevocational	46	44	8	10	25.7
Personal Typing/Notehand	11	5	14	6	8.9

Notes:

** indicates less than 1%

( ) Percentages in parenthesis indicate a breakdown of Trade & Industrial

Due to rounding, percentages may not total 100

Sex and Race Differences in Enrollments

Analysis of Table 2 indicates there are slight sex and race differences with regard to student selection of occupational versus non-occupational vocational courses. Using appropriate subtotals, the percentages are as follows:

	White	Non-white	Male	Female
Occupational courses	64%	57%	63%	59%
Non-occupational courses	36%	43%	37%	41%
	100%	100%	100%	100%

In comparison to non-white students, a larger percentage of white student enrollments in vocational education were in occupational areas than in non-occupational courses. This difference is partially due to the substantially larger number of white students enrolled in Business Education courses. There are very slight differences between males and females when comparing total occupational and non-occupational enrollments. The higher enrollment of males in Trade/Industry courses is apparently offset by high female enrollments in Business Education.

Enrollments in Courses versus Programs

It is extremely difficult to obtain an accurate count of students participating in a sequence of courses as opposed to those who take only one or two courses. One of the reasons for this is that a student who enrolls, for example, in fashion merchandising or automotive mechanics is considered a "completer" in VEDS reporting terms, just as though he or she had taken a sequence of courses. Since an unduplicated count of "completers" is not collected by Course Level, completion rates calculated on the basis of course title alone would result in an unclear picture.

Also, although some vocational areas may involve prerequisites, most do not specify a rigorous sequence of courses. Even when a program does include a sequence of increasingly advanced courses, there is no rigid order in which they must be taken. This flexibility is necessary to accommodate scheduling needs, particularly when students must be bussed to a vocational center. Therefore, a comparative analysis between those who complete a sequence of required courses (a "program") versus those who take only one or two courses can only be done retrospectively, through an analysis of the transcripts of high school graduates, particulary those who completed one or more vocational courses.

The distinction between students who take one or two vocational courses to round out their curriculum or for personal interest, and those who take a sequence of increasingly advanced courses with the intention of learning specific job skills for entering the labor market, is an important one. Vocational programs are held accountable for the placement of all vocational "completers," regardless of their level of concentration. Placement quotas are very difficult to achieve in programs in which a substantial number of students enroll simply to learn a particular skill, such as sewing or horticulture.

Enrollments versus Completions

Although it is not possible to differentiate between those who take a sequence of occupational courses and those who take only one or two courses, a comparison of the distribution of enrollees and completers across occupational programs does suggest some differences in levels of vocational concentration. This analysis is reflected in Table 3. For ease of reading, numbers in **bold** print reflect the distribution of **completers.**

Table 3: Distribution of Enrollees and Completers Across Occupational Programs (1984-85)

	WHITE MALES		NON-WHITE MALES		WHITE FEMALES		NON-WHITE FEMALES		TOTALS	
	Enr	Com	Enr	Com	Enr	Com	Enr	Com	Enr	Com
Agriculture	54%	**48%**	34%	**41%**	6%	**5%**	5%	**5%**	7075	**1867**
Marketing & Dist	16%	**14%**	19%	**14%**	32%	**36%**	34%	**36%**	3763	**1251**
Business Education	20%	**12%**	12%	**7%**	42%	**49%**	26%	**32%**	39599	**6211**
Home Economics (Occup)	4%	**5%**	22%	**16%**	17%	**21%**	56%	**58%**	1841	**740**
Health Occupations	4%	**1%**	4%	**3%**	44%	**53%**	48%	**44%**	1127	**575**
Trade & Industrial	44%	**45%**	36%	**34%**	9%	**9%**	11%	**12%**	20416	**6634**

Due to rounding, total percentages (across) may not equal 100

In this table, the relevant comparisons are between the enrollment distribution (not bolded) and the completion distribution (bolded) of the four student groups, within each program area. The most salient findings are that:

1. Although 54 percent of the enrollments in Agriculture were white males, they represented only 48 percent of the completers. This indicates that in comparison to non-white males, a smaller proportion of white males who enroll in Agriculture complete upper-level courses.

2. The opposite was true in Marketing/Distribution. In this program, 19 percent of the enrollments were non-white males, but they represent only 14 percent of the completers. This could indicate a tendency for non-white males to enroll in Marketing courses in the early high school years, but not in upper-level courses.

3. Compared to the percent of males (white and non-white) who enrolled in Business Education courses, proportionately fewer of them completed upper-level Business courses (20% of those enrolled versus 12% of those who completed for white males, and 12% of those enrolled versus 7% of those who completed for non-white males).

4. In Occupational Home Economics, non-white males constitute a higher proportion of enrollments than of completions. Again, this could indicate a tendency of non-white males to enroll in lower-level courses early in high school, but to fail to complete upper-level courses in grades 11 and 12.

5. In comparison to the distribution of enrollments in Health Occupations, white males and black females complete these courses at lower rates. For example, although white males represented 4 percent of the total enrollments in Health Occupations, they represent only 1 percent of the completions.

There are several factors that might account for these findings. The most obvious is that students simply lose interest in an area after completing a course or two, and do not pursue further training. Related to this is the fact that students may enroll in programs for different reasons. White males, for example, may enroll in Agriculture courses for the exposure to a variety of tools and general skills, while non-white males may be more occupationally-oriented and complete a series of increasingly advanced courses. Males may take Business Education courses to round out their preparation for a variety of fields or for advanced education, while females may complete an entire program in order to prepare for more immediate employment.

It is also possible that differences between enrollment and completion rates are due to scheduling conflicts and/or the need for remediation. Both of these factors can limit opportunities to take occupational vocational courses as students near graduation.

Enrollments of Special Needs Students

In school year 1984-85, about 25 percent of all vocational enrollments (over 31,000 students) were disadvantaged and/or handicapped. Table 4 displays two different ways of examining these enrollments. Column (a) of the table shows how

special needs students, as a group, were distributed across each of the occupational vocational areas and each of the non-occupational areas. Column (b) shows the percent of total enrollments in each vocational area accounted for by special needs students.

Table 4: Distribution of Special Needs Students Across Vocational Program Areas

	(a) Special Needs Students Only	(b) Proportion of Program Enrollment
OCCUPATIONAL PROGRAMS		
TOTAL ENROLLED	(19,592)	
Agriculture	11%	26%
Marketing & Distribution	4%	23%
Business Education	30%	15%
Home Economics (Occup)	6%	60%
Health Occupations	3%	48%
Trade & Industrial	46%	44%
NON-OCCUPATIONAL PROGRAMS		
TOTAL ENROLLED	(11,695)	
Consumer & Homemaking	50%	21%
Industrial Arts	7%	19%
Prevocational	41%	39%
Personal Typing/Notehand	1%	4%
ALL PROGRAMS	(31,287)	

Note: Total percentages may not equal 100 due to rounding

According to this table, 64 percent of all special needs students were enrolled in occupational vocational courses. This exceeds slightly the rate of 61 percent for all students. Of the 19,592 special needs students enrolled in occupational areas, the largest percentages took courses in Trade/Industry (46%) and Business Education (30%). Comparing these figures with the top half of Table 2 (distribution of all vocational students), it can be seen that the distribution of special needs students most closely parallels the enrollment pattern of non-white males. Compared

to the enrollment pattern of all students (last column of Table 2), a larger proportion of special needs students took Trade/Industry courses (46% versus 27% of all occupational enrollments), and a smaller percentage enrolled in Business Education classes (30% versus 53% for all occupational enrollments).

Among special needs students who enrolled in non-occupational courses, the highest percentages took Consumer/Homemaking (50%) and Prevocational (41%) classes. Comparing this with the distribution of all non-occupational enrollments in 1984-85 (bottom half of Table 2), a higher proportion of special needs students took Prevocational courses (41% versus 26% of all non-occupational enrollments), and a smaller percent took Personal Typing (1% versus 9% of all non-occupational enrollments).

Another way of looking at the participation of disadvantaged and handicapped students in vocational education is to determine what percent of each program's enrollment is accounted for by special needs students. This is reflected in Column (b) of Table 4. For example, while only 6 percent of the special needs students in occupational programs were enrolled in Occupational Home Economics, they account for 60 percent of total enrollments in that area. A similar pattern occurs in Health Occupations: only 3 percent of the special needs students in occupational programs were enrolled in Health Occupations courses, but they accounted for 48 percent of all students enrolled in that program.

Student Profile

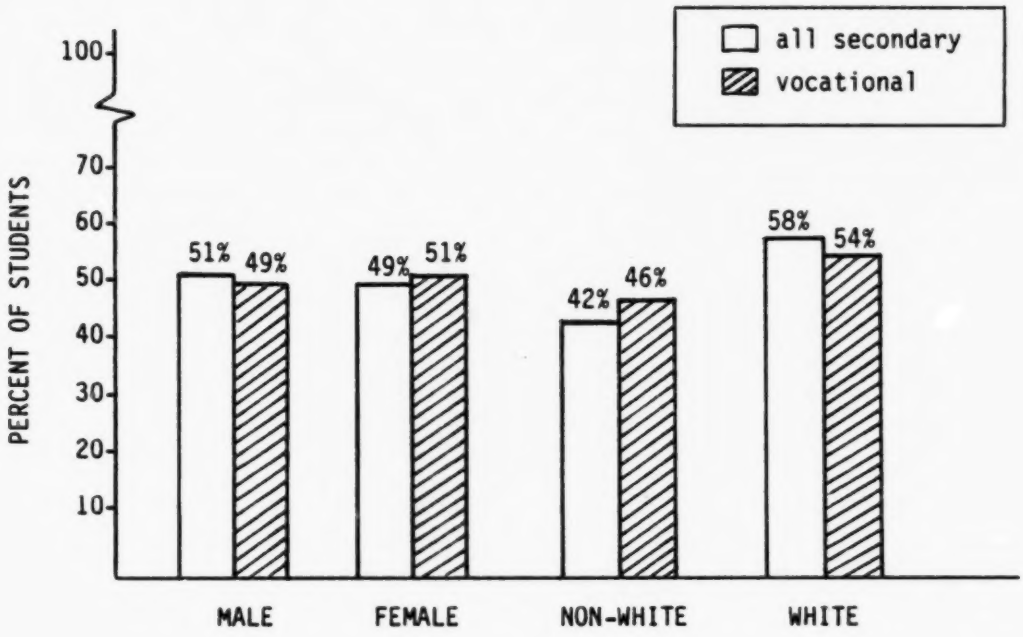
The information provided up to this point has dealt with enrollment patterns across occupational programs. This section of the report will analyze the demographic and achievement characteristics of students who enroll in, complete, and are placed from vocational programs. The final section will provide information on the placement status of vocational completers.

Demographic Characteristics of Enrollees

A comparison of the race and sex composition of all secondary enrollments with those of students who enrolled in vocational courses in 1984-85 is shown in Table 5. Overall, vocational enrollments parallel total high school enrollments very closely.

Non-white (predominantly black) students are slightly over-represented among those who take vocational courses, but the percentage differences are very small. These data contradict the often held belief that vocational education attracts only certain student groups (e.g., males or black students). Rather, it appears to serve all groups in proportion to their numbers enrolled in secondary education.

Table 5: Comparison of Vocational and Total Secondary Enrollment by Race and Sex of Students



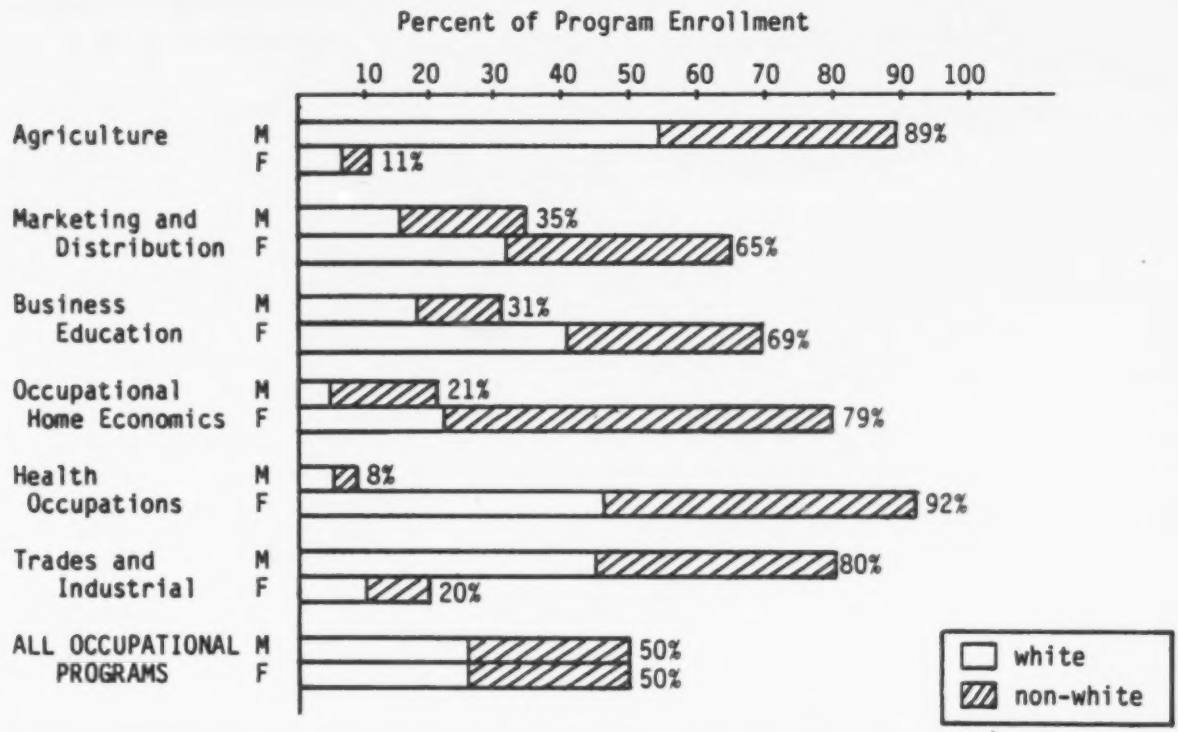
Sources: Special Preliminary Enrollment Report (June, 1985), Office of Vocational Education, S.C. Department of Education; 180-Day Enrollment Summary, Management Information Section, S.C. Department of Education

Data are not available that would allow for more specific comparisons between students enrolled in vocational programs and those enrolled in general or college preparatory programs. Also, data on the socioeconomic characteristics of vocational students are not collected, and therefore cannot be reported.

Student Composition Within Occupational Areas

The sex and race composition of students who were enrolled in each of the six occupational areas in 1984-85 is shown in Figure 3. In Agriculture, the vast majority of students were male (89%), and 61 percent of these were white. Of those enrolled in Marketing and Distribution courses, the largest percentage (65%) were female, but enrollments were distributed fairly evenly between white and non-white students.

Figure 3: Student Composition in Each Occupational Area (1984-85)



A surprising 31 percent of all students enrolled in Business Education were male. This may reflect the increased variety of program offerings, which include data processing and computer-related courses. Also, a larger percentage of Business Education enrollments (62% of the males and 61% of the females) were white.

Female enrollments predominated in Occupational Home Economics and in Health Occupations. In Occupational Home Economics, non-white students represented a significantly higher proportion of enrollments (80% of the males and 72% of the females), but Health Occupations enrollments were fairly evenly distributed between white and non-white students. Eighty percent of the students who took Trade/-Industry courses were male, and of these, slightly less than half were non-white.

Figure 3 again points out that in 1984-85, an equal number of males and females enrolled in occupational vocational courses; white and non-white students were represented in proportion to their total secondary enrollments. Enrollment patterns, however, continue to follow gender traditions. Even though females comprise about half of the vocational student population, they represent the overwhelming majority

of students enrolled in Health Occupations, Occupational Home Economics, and Business Education. The highest concentration of males was in Agriculture and Trade/-Industry programs, areas that are traditionally male-dominated. Efforts are being made to encourage students to enter non-traditional fields, and this effort will be expanded as a result of the new federal vocational education legislation. The information presented here could serve as a "benchmark" for assessing progress toward increased sex equity in vocational enrollments.

It should also be pointed out that specific course enrollment patterns are obscured when the data are collapsed across an entire program, on a state-wide basis. For example, while females represent 20 percent of the enrollments in Trade/Industry occupations, they are found predominantly in cosmetology and industrial sewing classes. The high percentage of females in Marketing and Distribution classes is due largely to enrollments in fashion merchandising and related courses. Although an analysis of specific course enrollments would be too laborious for this report, it would provide valuable information on a county or state-section basis.

Demographic Characteristics of Special Needs Enrollments

During the past school year, over 31,000 secondary students - one out of every four students enrolled in vocational education courses - were classified as having special needs. According to the VEDS, 75 percent of these students were disadvantaged (academically, economically, or due to limited English proficiency), and 25 percent were classified as handicapped (deaf, blind, retarded, orthopedically impaired, etc.). Slightly more than 90 percent of these special needs students were "mainstreamed" into regular vocational classes; 9 percent were served in self-contained classrooms.

The race and sex of special needs students are not collected in the VEDS. Therefore, no comparisons can be drawn between the demographic characteristics of these students and all vocational enrollments.

Demographic Characteristics of Completers

Data on "completers," or students in grades 11 and 12 who finish an upper-level vocational course, are not collected by Course Level (I, II, etc.), and therefore do not differentiate between those who complete a sequence of courses and those who take only one or two courses. However, the reporting system does include information on the race and sex of completers, and it does distinguish between "non-returning" (graduating or otherwise leaving school) and "returning" (still in high school) completers.

In terms of race and sex characteristics, the profile of completers matches almost exactly the profile of enrollees. That is, of total enrollments in vocational courses, 49 percent are male; of total completers of vocational courses, 49 percent are male, etc. Nearly 80 percent of all completers are "non-returning"; 21 percent have completed upper level courses, but are still in school.

Information on completers is reported by CIP (Classification of Instructional Program) code only. Since a given CIP code may include various course levels (e.g., Child Development I and II), it is not possible to calculate the number of completers of a final course in a program. Since enrollment data are available by course level, but completer data are not, it is impossible to calculate completion rates across programs.

Demographic Characteristics of Placements

"Placement" refers to the status of vocational students nine months after completion. Based on the course completions from the previous year, placement reports indicate the number of students who were available for placement, and of those, the number employed in training-related jobs, in unrelated jobs, unemployed, in the military, attending college, etc. These data will be discussed in the section on vocational education outcomes. Of concern here are the demographic characteristics of vocational graduates.

Beginning in 1983-84, with the change to a teacher-based follow-up system, the race and sex of vocational placements were deleted from the VEDS reporting form. Although this information is available for students who were placed from vocational programs prior to 1984, the data are less reliable (based on only a small sample of former students who returned mail questionnaires) and now outdated. Therefore, no information can be provided in this report regarding the demographic characteristics of the most recent placements from vocational programs. It is also impossible to compare, demographically, those who enroll in vocational courses with those who are placed.

Achievement Characteristics

Virtually no data are available on the achievement characteristics of students who enroll in, complete, and are placed from vocational courses. One source of such information, particularly with regard to basic skills, are the scores earned on the CTBS (California Test of Basic Skills). Because the final administration of the CTBS occurs at the tenth grade, there is no way to accurately identify which students will subsequently enroll in vocational courses. Although this can be done retrospectively, no procedure currently exists for linking a specific subgroup of

students (i.e., those who have completed a vocational program) to their previous scores on the CTBS, their overall grade averages, or any other indicator of academic achievement. Further, no clear definition exists for identifying a student as "vocational": would the definition include only those students who completed a series of courses? only those who enroll in a series of occupational courses? all students enrolled in a non-occupational or an occupational course?

The Department of Education's Office of Research, which scores and analyzes the CTBS exams, has developed a system for accurately identifying students through a combination of name, race, and birthdate. The Office of Vocational Education is working on a modification of its data collection form to include the birthdate of vocational completers (race and sex are already provided). By linking the two data sets together, an achievement profile of vocational completers can be constructed. Such a profile will have meaning, however, only if an acceptable definition of "vocational student" can be developed.

Even when available, academic profiles will represent only one source of achievement information. They will not reflect other areas of accomplishment unique to vocational students, such as employment maturity, application of knowledge, and craftsmanship. Even though such factors are valid evidence of achievement, they are rarely considered or measured.

Outcomes of Vocational Education

The effectiveness of a vocational education system can be gauged in many ways, but the two most common methods include:

1. conducting follow-up ("placement") studies of students at some point after graduation to determine current status, job earnings, perceived adequacy of training, etc.; and

2. assessing employers' perceptions of the adequacy of training that has been provided to employees who completed vocational education programs.

Although both types of information have been requested for the EIA study, only the first type, placement status, is available through the VEDS for inclusion in this report. A separate study of employers' perceptions is being conducted, and will be reported later. Placement data reflect not only on the effectiveness of training, but such information can serve as an indicator of vocational "achievement."

As noted earlier, placement data are collected nine months after students complete a vocational program and reflect the percent of completers who obtained training-related employment, who are continuing in school, etc. In previous years, this information was collected through a mail survey of a sample of completers of vocational programs. Sampling problems and low return rates prompted the State Office of Vocational Education to develop a more reliable, teacher-based reporting system. Each school is now supplied with a computer-generated tally of the previous year's completers in each course, for which current status must be designated.

While this system results in more complete information, it allows for wide variation across schools with regard to how classifications such as "available for placement" and "placed in area for which trained" are defined. For this reason, the following placement data should be interpreted with caution.

Table 6 shows the placement status of students who completed vocational courses in 1983-84. This information is a summary of the VEDS teacher-based follow-up report, and the findings may not be compatible with information collected in previous years using different methods.

Table 6: Placement Status of Students Who Completed Vocational Courses in 1983-84 by Occupational Area

	N*	Placed in Area	Placed Not in Area	Cont Educ**	In Mltry	Unempl Seeking	Unempl - Not Seeking	Status Unknown
Agriculture	1177	29%	26%	20%	10%	6%	2%	7%
Marketing-Dist	1141	34%	9%	27%	4%	10%	5%	10%
Health Occup	662	40%	14%	28%	--	7%	6%	5%
Occup Home Ec	674	22%	16%	16%	3%	19%	10%	14%
Business Educ	2874	25%	13%	41%	2%	7%	4%	8%
Trade/Industry	6457	30%	25%	19%	8%	8%	3%	7%
ALL PROGRAMS	12985	29%	20%	25%	6%	8%	4%	8%

* Excludes those remaining in high school ("returning completers")
** In college, TEC, or other postsecondary institution
Total percentages may not equal 100 due to rounding

Analysis of placement information shows that 80 percent of the students who completed occupational courses in school year 1983-84 are now either working, in school, or in the military. Compared to the state-wide unemployment rate of about 10 percent, only 8 percent of last year's occupational completers are unemployed by choice (although some whose status is unknown may be unemployed).

Further analysis of Table 6 shows that programs from which the highest percentage of students entered employment, related or unrelated, include Agriculture (55%), Trade/Industry (55%), and Health Occupations (54%). The highest training-related employment rate was for graduates who had taken Health Occupations, a more specialized program. Business Education places the highest proportion (41%) of non-returning completers in postsecondary institutions, while the largest percentages of graduates entering the military had completed courses in Agriculture or Trade/Industry (predominantly male enrollments).

The highest percentages of unemployed (both those seeking employment and those unemployed by choice) and completers whose status was unknown were students who had taken Occupational Home Economics courses such as child care, food services, and institutional management. It is noteworthy that this program also serves a high proportion of disadvantaged students. The percentage of students who completed Marketing/Distribution courses, and who are now unemployed but seeking work, is also slightly higher than in most other programs.

In Report #2 to the General Assembly, these placement findings will be compared to those obtained through a telephone interview survey with a sample of 1982-83 occupational program completers. This comparison will point out some important differences and similarities in results that can occur when various follow-up methods are used.

Outcomes for Vocational versus General Curriculum Graduates

Because state-wide placement data are not collected on students who complete a general or college preparatory program, it is not possible to make comparisons between vocational completers and other high school graduates. However, such studies have been conducted at the national level, and these will be summarized in Report #2.

Outcomes for Students Who Fail to Complete Vocational Courses

Another information gap exists with regard to "drop-outs" -- both students who fail to complete a vocational program but who remain in school, and those who drop out of high school while taking vocational courses. Information about the demographic and achievement characteristics of these students, as well as their reasons

for leaving high school and/or vocational programs, would aid in developing strategies for increasing retention rates. Of particular interest would be the effects of increased graduation requirements, local job market and economic changes, and basic skills deficits on vocational enrollment and retention.

CONCLUSIONS AND RECOMMENDATIONS

This overview of the vocational education system has provided much information, from which many specific conclusions and recommendations can be drawn. However, the Council has chosen to reserve some of its recommendations until all of the study elements have been completed. This will avoid drawing premature conclusions that might be reversed by later findings. Conclusions and recommendations are limited to the following:

1. There is no clear policy regarding the purposes and goals of vocational education (occupational or non-occupational) and a much too limited set of outcome criteria linked to specific purposes and goals.

   RECOMMENDATION: Clear policies should be developed regarding the intended purposes and objectives of both occupational and non-occupational vocational education. These purposes may be program-specific, and need to be tied to relevant outcome measures.

2. Much of the information requested by the General Assembly was not available through the Vocational Education Data System (VEDS), including:

   a) a classification system in which distinctions can be made between students who enroll in a series of vocational occupational courses and those who enroll in one or two courses for reasons other than immediate employment or advanced technical training;
   b) a means of identifying "vocational" students for purposes of compiling demographic or achievement profiles;
   c) the race and sex of special needs students and those placed from occupational vocational programs.

   RECOMMENDATIONS: Recommendations will be reserved until completion of the study on an improved management information system.

3. Enrollments in Prevocational courses seem low and represent predominantly males.

   RECOMMENDATION: Improved efforts are needed to encourage students to enroll in Prevocational courses. These efforts should include expanding programs to cover a wider range of current and emerging occupations, and providing incentives for females to enroll.

4. Enrollments in vocational programs continue to follow gender traditions.

   RECOMMENDATION: To be consistent with federally stated goals, efforts to expose students to non-traditional occupations should be expanded.

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(5) Campbell, P.B., et al. Patterns of Participation in Secondary Vocational Education. Columbus, OH: Ohio State University, National Center for Research in Vocational Education, 1981.

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APPENDIX A

South Carolina Area Vocational Centers

Abbeville County Career Center
P. O. Box 280
Abbeville, S. C. 29620

Aiken County Vocational Center
P. O. Box 224
Langley, S. C. 29834

Allendale County Vocational Center
P. O. Box 308
Allendale, S. C. 29810

Anderson County District 1 & 2 Voc. Center
Route 2
Williamston, S. C. 29697

Aynor-Conway Career Center
Route 8, Box 343
Conway, S. C. 29526

Barnwell County Vocational Center
Route 2, Box 232
Blackville, S. C. 29817

Beaufort-Jasper Career Education Center
Route 1, Box 127
Ridgeland, S. C. 29936

Bonneau Vocational Center
Route 2, Box 618
Bonneau, S. C. 29431

Calhoun-Orangeburg Vocational Ed. Center
P. O. Box 1446
Orangeburg, S. C. 29115

Cherokee Area Vocational Center
P. O. Box 1238
Gaffney, S. C. 29340

Chester County Career Center
72 By-Pass
Chester, S. C. 29706

Colleton County Area Voc. Center
525 Recold Road
Walterboro, S. C. 29488

Cooper River Ed. Occupation Center
1600 Saranac Street
N. Charleston, S. C. 29406

Cope Area Vocational Center
P.O. Box 128
Cope, S. C. 29038

Daniel Morgan Area Vocational Center
201 Zion Hill Road
Spartanburg, S. C. 29302

Darlington Career Center
P. O. 749, Smith Avenue Extension
Darlington, S. C. 29532

Dillon County Area Vocational Center
P. O. Drawer 1130
Dillon, S. C. 29536

Donaldson Vocational Education Center
Vocational Drive, Donaldson Center
Greenville, S. C. 29605

Dorchester County Career School
Route 1, Box 825
Dorchester, S. C. 29437

Enoree Vocational Center
108 Scalybark Road
Greenville, S. C. 29609

Fairfield County Vocational Center
Route 2
Winnsboro, S. C. 29180

F. E. Dubose Vocational Center
P. O. Box 428
Manning, S. C. 29102

South Carolina Area Vocational Centers -(Continued)

Finklea Career Center
Route 1
Loris, S. C. 29569

Florence Area Vocational Center
126 E. Howe Springs Road
Florence, S. C. 29501

Floyd D. Johnson Vocational Center
Highway 321 South
York, S. C. 29745

Foothills Vocational Center
Route 3, St. Mark's Road
Taylors, S. C. 29687

Georgetown Career Center
P. O. Drawer 720
Georgetown, S. C. 29442

Golden Strip Vocational Center
Route 10, E. Butler Road
Greenville, S. C. 29607

Grand Strand Career Center
900 79th Avenue N.
Myrtle Beach, S. C. 29577

Greenwood County Vocational Facilities
Route 8, Airport Road
Greenwood, S. C. 29646

Hartsville Career Center
Clyburn Circle
Hartsville, S. C. 29550

H. B. Swofford Area Vocational Center
Route 2, Box 305 B
Inman, S. C. 29349

Hemingway Area Vocational Center
Route 2, Box 12
Hemingway, S. C. 29554

Irmo-Chapin Career Center
6745 St. Andrews Road
Columbia, S. C. 29210

Kershaw County Vocational Center
Route 4, Box 143, Highway 1 North
Camden, S. C. 29020

Lancaster Area Vocational School
625 Normandy Road
Lancaster, S.C. 29720

Lee County Vocational Center
P. O. Box 522
Bishopville, S. C. 29010

Lexington 1 Area Vocational Center
2421 Augusta Highway
Lexington, S. C. 29072

Lynhaven Career Center
3560 Lynhaven Drive
Columbia, S. C. 29204

Marion County Vocational Ed. Center
P. O. Box 890
Marion, S. C. 29571

Marlboro Vocational School
Route 3, Box 2
Bennettsville, S. C. 29512

McDuffie Vocational High School
1225 S. McDuffie Street
Anderson, S. C. 29621

Newberry County Vocational Center
P. O. Box 799
Newberry, S. C. 29108

Oakley Vocational Center
Route 2, Box 891
Moncks Corner, S. C. 29461

Oconee Vocational Center
Route 1, Box 3
Seneca, S. C. 29678

Pickens County Vocational Center
Route 8, Box 377
Easley, S. C. 29640

R. D. Anderson Area Vocational Center
P. O. Box 248
Moore, S. C. 29369

Rock Hill Career Development Center
P. O. Drawer 10072
Rock Hill, S. C. 29730

South Carolina Area Vocational Centers - (Continued)

Strom Thurmond Vocational Center
Route 1
Johnston, S. C. 29832

Sumter County Career Center
2612 McCray's Mill Road
Sumter, S. C. 29150

Timmonsville Career Center
104 N. Kershaw Street
Timmonsville, S. C. 29161

Union County Voucational Center
Peach Orchard Road
Union, S. C. 29379

W. Gresham Meggett Ed. Occ. Center
Route 5, Box 137
Charleston, S. C. 29412

Wilson Vocational Center
Route 3, Sparkleberry Lane
Columbia, S. C. 29206

South Carolina Comprehensive High Schools

Airport High School
1315 Boston Avenue
W. Columbia, S. C. 29169

Andrew Jackson High School
Route 2, Box 139-A
Kershaw, S. C. 29067

Andrews High School
Box 5
Andrews, S. C. 29510

Baptist Hill High
RFD 1
Yonges Island, S. C. 29494

Batesburg-Leesville High School
Summerland Avenue
Batesburg, S. C. 29006

Brookland Cayce High School
1300 State Street
Cayce,S. C. 29033

Buford Comp. High School
Route 9
Lancaster, S. C. 29720

Burke High School
207 President Street
Charleston, S. C. 29403

Cainhoy High School
Highway 98
Huger, S. C. 29343

Central High School
Pageland,S. C. 29728

Cheraw High School
Highway No. 9 West
Cheraw, S. C. 29520

Chesterfield High School
Chesterfield, S. C. 29709

South Carolina Comprehensive High Schools

Clinton High School
North Adair Street
Clinton, S. C. 29325

Clover High School
North Adair Street
Clinton, S. C. 29710

Columbia High School
Westchester Drive
Columbia, S. C. 29210

Crescent High School
Box 88
Iva, S. C. 29655

Cross High School
Highway 6
Cross, S.C. 29436

Eau Claire High School
4800 Monticello Road
Columbia, S. C. 29203

Elloree High School
Drawer L
Elloree S. C. 29047

Estill High School
Box 757
Estille, S. C. 29918

Hannah-Pamplico High School
Box 428
Pamplico, S. C. 29583

Holly Hill-Roberts High School
Box 338
Holly Hill, S. C. 29059

Indian Land High School
Route 2
Fort Mill, S. C. 29715

Lake City High School
Matthews Road
Lake City, S. C. 29560

Laurins District 55 High School
P. O. Box 309, Highway 76 W.
Laurens, S. C. 29360

Lincoln High School
P. O. Box 348
McClellanville, S. C. 29458

Lower Richland High School
Route 2
Hopkins, S. C. 29061

McBee High School
McBee, S. C. 29101

McCormick High School
Box 398
McCormick, S. S. 29835

Middleton High School
1776 William Kennerty Drive
Charleston, S. C. 29407

North High School
Box 386
North, S. C. 29112

Pendleton High School
Box 218
Pendleton, S. C. 29670

Richland Northeast High School
7500 Brookfield Road
Columbia, S. C. 29206

Ridge Springs-Monetta High School
Route 1
Monette, S.C. 29205

Saluda High School
400 West Butler Road
Salua, S. C. 29138

St. Johns High School
1518 Main Road
Johns Island, S. C. 29455

St. Andrews High School
721 Wappoo Road
Charleston, S. C.

Swansea High School
Swansea, S. C. 29160

South Carolina Comprehensive High Schools - (Continued)

Wade Hampton High School
Box 338
Hampton, S. C. 29924

Wagener-Salley High School
Route 1
Salley, S. C. 29164

Wando High School
1560 Mathis Ferry Road
Mt. Pleasant, S. C. 29464